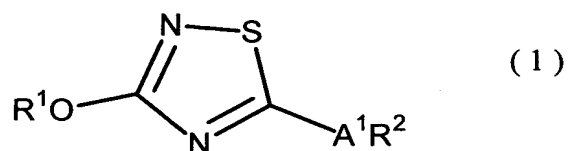


ABSTRACT

The present invention relates to a novel 1,2,4-thiadiazole compound represented by the formula (1):



wherein, R¹ represents C3-C7 alkynyl that may be substituted with halogen atom; R² represents C3-C8 cycloalkyl which may be substituted with C1-C4 alkyl, halogen atom and trifluoromethyl or the like; A¹ represents a single bond, C1-C2 alkylene or C2-C3 alkylidene.

The 1,2,4-thiadiazole compound has an excellent arthropod controlling activity, and can effectively control an arthropod pests such as insect pests, acarine pests and the like.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/046125 A1

(51) International Patent Classification⁷: C07D 285/08,
A01N 43/836

(21) International Application Number:
PCT/JP2003/013750

(22) International Filing Date: 28 October 2003 (28.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2002-337884 21 November 2002 (21.11.2002) JP

(71) Applicant (for all designated States except US): SUM-
ITOMO CHEMICAL COMPANY, LIMITED [JP/JP];
5-33, Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka 541-
8550 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): IHARA, Hideki
[JP/JP]; 8-7-20, Hon-machi, Toyonaka-shi, Osaka
560-0021 (JP). TAKAOKA, Daisuke [JP/JP]; 8-7-20,
Hon-machi, Toyonaka-shi, Osaka 560-0021 (JP).

(74) Agents: ENOMOTO, Masayuki et al.; c/o Sumitomo
Chemical Intellectual Property Service, Limited, 5-33,
Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka 541-8550
(JP).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, GR, GU, HT, IL, IN, IS, KE, KG, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

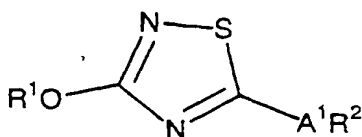
(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: 1,2,4-THIA DIAZOLE COMPOUNDS AND ARTHROPOD CONTROLLING COMPOSITION CONTAINING THE
SAME



(1)

(57) Abstract: The present invention relates to a novel
1,2,4-thiadiazole compound represented by the formula
(1): wherein, R¹ represents C3-C7 alkynyl that may
be substituted with halogen atom; R² represents C3-C8
cycloalkyl which may be substituted with C1-C4 alkyl,
halogen atom and trifluoromethyl or the like; A¹ represents
a single bond, C1-C2 alkylene or C2-C3 alkylidene. The

1,2,4-thiadiazole compound has an excellent arthropod controlling activity, and can effectively control an arthropod pests such
as insect pests, acarine pests and the like.

WO 2004/046125 A1